

DPV® PRODUCT LICENSEE PERFORMANCE REQUIREMENTS

1 General

- 1.1 There are over 165 million address records in the United States Postal Service® address database. The DPV® product identifies whether a ZIP + 4® coded address is currently represented in the USPS® delivery point file as a known address record. A CASS Certified™ ZIP + 4 address-matching product matches and standardizes addresses within a range of addresses. Incorporating DPV with the ZIP + 4 system takes it one step further and validates the address as a known USPS address record. The DPV Product allows users to identify potential addressing issues that may cause problems with delivery. Correcting potential addressing issues can reduce the amount of undeliverable-as-addressed (UAA) pieces, which in turn will result in more efficient mail processing and delivery.
- 1.2 To achieve DPV certification, the Licensee must comply with all requirements, specifications, and report formats contained within the License Agreement, the most current version of this document, and the most current version of the Interface Developers Guide unless explicitly allowed, prohibited, or modified by USPS in writing. Copies of this document and updates to the License Agreement and Certification Procedures will be posted on the RIBBS website at <http://www.ribbs.usps.gov/files/dpv/>.
- 1.3 DPV does not return information regarding the specific business, owners, occupants, or residents of a specific address, and does not confirm if they reside at that specific address.

2 Purpose

- 2.1 The purpose of the performance requirements is to enhance the processing and delivery of mail, and provide mutual cost reduction opportunities through improved efficiency by ensuring USPS customers have access to the following address list services:
 - Acceptable standardization and address matching services
 - Detection of potential undeliverable addresses (excluding change of address)
 - DPV information for existing addresses in the mailer's file

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- 2.2 Another purpose of the performance requirements is to establish standard performance and service criteria for DPV licensed service providers.

3 Product Description

- 3.1 DPV utilizes secure datasets (hash tables) that include representations of known addresses. The input to the DPV process is in the form of a 9-digit ZIP + 4 code and a parsed address. DPV secure datasets will only provide Y, D, S, N, or blank answers, (e.g., Is 123 Main St validate a known USPS address record?). Refer to Exhibit B for descriptions of these codes.

4 Fulfillment

- 4.1 DPV updates will be provided monthly via electronic media to Licensee.

5 General Requirements

- 5.1 Licensee is responsible for providing all necessary interface software.
- 5.2 The USPS may consider an additional agreement to allow the use of the DPV product outside of CASS Certified™ operations and for non-mailing purpose. In these cases, the users will be required to demonstrate to the satisfaction of USPS that they warrant this consideration. Refer to paragraph 7.9 *Standalone Users*.
- 5.3 Licensee's ZIP + 4 matching software must adhere to specific USPS guidelines regarding the services as well as the matching rules and specifications herein.
- 5.3.1 Licensees must obtain CASS™ certification for ZIP + 4 coding prior to DPV licensing.
- 5.3.2 In addition, Licensees will be tested periodically using a test address file similar to CASS.
- 5.4 Licensee shall not export the DPV product outside the boundaries of the United States of America or its territories.
- 5.5 In conjunction with services to be performed as a Licensee of the USPS, the Licensee agrees that any and all data, source code, or information received from USPS or otherwise obtained or developed in the course of, or as the result of the performance of such services shall:

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- 5.5.1 be kept in strict confidence and shall not be disclosed in any manner to any organization (including professional societies) other than USPS until released of such obligation by the contracting officer in writing, and
- 5.5.2 when in the Licensee's possession, be provided with adequate physical, technical, and administrative safeguards to prevent unauthorized access, disclosure, misuse, or attention.
- 5.6 Customer education shall be the Licensee's responsibility.
 - 5.6.1 The Licensee will ensure its customers understand the DPV process and interface.
 - 5.6.2 The Licensee must provide a DPV product fact sheet to each customer who wishes to subscribe. The fact sheet must explain the product in detail and be approved by USPS.
 - 5.6.3 Licensee's customers requiring technical information must contact a customer service group managed by the Licensee.
- 5.7 If operating on a network, the interface system must be in an environment both physically and electronically secure to avoid unauthorized use.
- 5.8 Licensee shall be capable of processing electronic media to obtain the various data sets and product files.
- 5.9 Licensees must organize redistribution to synchronize DPV updates with their ZIP + 4 product, which will allow the best up-to-date addresses.
 - 5.9.1 To obtain the best results from the DPV process, USPS recommends the Licensee utilize a monthly release of the ZIP + 4 product.
 - 5.9.2 Licensee shall coordinate the update of DPV tables with the equivalent release of the ZIP + 4® file.
- 5.10 USPS-supplied DPV updates more than 60 days old shall be destroyed using common practices for disposal of sensitive materials. Examples of acceptable methods of destruction include shredding, punching, incinerating, breaking the physical electronic media, or permanent file deletion.
- 5.11 Licensee shall establish a central email address for receipt and disbursement of USPS electronic correspondence within Licensee's organization.

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6 *Specifics Requirements*

- 6.1 A Licensee or software developer writing an interface to the DPV product must first ensure the address list is processed through USPS CASS Certified software to obtain a 9-digit ZIP Code™ and a parsed address immediately prior to the validation process.
 - 6.1.1 The DPV process only validates address records; it cannot assign a ZIP + 4 code, nor will it respond to a non-ZIP + 4 coded address.
 - 6.1.2 Licensee must maintain the current performance standard required for CASS certification as defined by the most current CASS cycle.
 - 6.1.3 The interface must be reviewed, tested, and approved by USPS prior to any actual DPV processing occurring in a production environment to ensure all license requirements are met.
 - 6.1.4 After review, USPS will provide Licensee with written approval or rejection of the proposed interface system.
 - 6.1.5 Licensees will design a process that will cause the DPV interface to stop working when the DPV data has aged more than 105 days from the product date.
- 6.2 Licensees shall encapsulate the DPV product as received from USPS into a secure form subject to approval by USPS. Licensees must ensure the DPV-integrated product is released in the secure form that will only allow interaction with authorized CASS software.
 - 6.2.1 Licensee's DPV-integrated product in its secure form shall render the DPV data unusable to unauthorized access by customers, other software developers, or independent use.
 - 6.2.2 Any sublicense of Licensee's DPV-integrated product in its secure form must retain all elements of the secure form as provided by the Licensee in any subsequent distribution or product provided by or under the sublicense agreement.

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6.3 Internet or Online Lookup System Restrictions

6.3.1 Where DPV licensed materials are used in an online format, the information returned to the inquiring system shall be limited to confirmation of whether the input is a known address record.

6.3.2 Where DPV licensed materials are used in an online interface environment, the host DPV Licensee shall design the interface to prevent unauthorized access from anonymous sources. Licensees providing online inquiry capability shall know their end users and shall not respond to inquiries from unknown users.

6.3.3 In the implementation of DPV licensed materials in an online environment, the Licensee shall take all steps necessary to prevent the potential misuse of the DPV licensed materials from users attempting to automate the submission of addresses to the online inquiry system in a simulated manual-entry mode. Licensees shall have a management process to monitor the volume of inquiries made through their online system interface and validate that no obvious simulation of manual entry is occurring.

6.4 Licensee is responsible for distributing license related electronic correspondence from USPS to the appropriate personnel within Licensee's organization. Pursuant to paragraph 5.11, all electronic correspondence will be directed to a central email address within the Licensee's organization. The email address must be ncscinfo@<yourcompany>.com. In the event that this address is already assigned for some other purpose, an alternate address must be submitted to USPS for approval. Licensee will subsequently distribute all applicable USPS notifications internally to ensure receipt by the proper staff. Such correspondence will also be sent to the pertinent contacts provided during the application process. However in the event of "bounce-backs", successful delivery via the central email address will be considered confirmation of receipt.

7 ***False Positive Reporting and Stop Processing***

7.1 Per the License Agreement, the DPV product shall not be used to facilitate the creation of address lists artificially.

7.2 To detect conditions where address records appear to be the result of artificial manufacture, and not legitimately obtained, a table of artificially-manufactured

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addresses is provided as part of the product. These addresses reside in the False Positive table (dph.hsf). For each negative response that occurs in a query of the A hash table (dph.hsa), a query must be made to the False Positive table.

- 7.3 Licensee shall design or purchase a design for a false positive reporting and stop processing function.

- 7.4 **Licensed NCOA^{Link®} Full Service Providers**

- 7.4.1 Any time an address encounters a match to the False Positive table, the Licensee may continue processing, but must notify USPS immediately of the customer's name and address using the file description identified in DPV False Positive File Layout (Exhibit A).

- 7.4.2 The Licensee must transfer a file containing the affected addresses from each address list to Dsf2stop@usps.gov with the subject line *DPV False Positive*.

- 7.5 **MASS[™] Processing on MLOCR Equipment**

- 7.5.1 Any time an address encounters a match to the False Positive table, the MLOCR equipment may continue processing, but the service providers must notify USPS immediately of the occurrence using one of the processes identified in the DPV False Positive File Layout (Exhibit A).

- 7.5.2 The service provider must transfer a file containing the affected addresses from each address list to Dsf2stop@usps.gov or via fax to 650-577-2500 with the subject line *DPV False Positive*.

- 7.5.3 USPS reserves the right to require a Licensee to suspend a service provider's ability to perform processing when multiple incidents of artificial address detection occur.

- 7.6 **Third-Party Service Providers**

- 7.6.1 Third-Party Service Providers are classified as commercial users performing the production and creation of mail on behalf of a third party with the direct intent of producing mail that will appear in the mail stream.

- 7.6.2 While there are no restrictions on the elapsed time between the creation of the list and the actual mail processing, the data must remain unchanged from one

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step to the next as processed by the CASS Certified software components as well as meeting the same monthly product cycle for the certified product.

- 7.6.3 USPS will consider entering into an additional agreement that may assist in more efficient processing. Under this agreement, these providers would not be allowed to process their own mailing lists at any time. Providers that process their own mailing lists must default to the Stop Processing requirement for End Users identified in this section.

7.7 **End Users**

- 7.7.1 End Users are classified as customers receiving CASS Certified DPV data from a Licensed Service Provider.
- 7.7.2 Any time an address encounters a match to the False Positive table, the interface must cease validating delivery points of addresses for the specific address list. The function shall be halted immediately for that specific address list. Processing of other address lists may continue. End User may continue to standardize the remaining addresses on this list if desired. End User shall immediately notify the Licensee that the processing was halted due to an unauthorized exposure to an apparent artificially created address.
- 7.7.3 Licensee's software interface shall be designed to include a unique one-time only restart code to restore the processing capability. This code cannot be used after the first occurrence to bypass any further stop processing error codes.
- 7.7.4 Licensee shall notify USPS immediately of the customer's name and address using the file description as identified in the DPV False Positive File Layout (Exhibit A). The Licensee must transfer a file containing the affected addresses from each address list to Dsf2stop@usps.gov with the subject line *DPV False Positive*.
- 7.7.5 USPS reserves the right to require a Licensee to suspend an End User's ability to perform processing when multiple incidents of artificial address detection occur.

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- 7.7.6 The following error code explanation regarding the stop processing function shall be placed in all documentation provided to the End User regarding a false positive match:

“Processing was terminated due to the detection of what is determined to be an artificially created address. No address beyond this point has been processed using this product. In accordance with the License Agreement between USPS and <<Licensee>>, this USPS product shall be used to process legitimately obtained addresses only, and shall not be used for the purpose of artificially creating address lists. Continuing use of this product requires compliance with all terms of the License Agreement. If the customer believes this address was identified in error, contact the Licensee.”

- 7.7.7 USPS will consider entering into an additional agreement that may assist in more efficient processing for mailing activities that demonstrate a low-risk of abuse. In these cases, the users will be required to demonstrate to the satisfaction of USPS that their ability to prepare and enter mail would suffer a severe negative impact by the termination of the CASS[™]/DPV[™] software.

7.8 Call Center Operations

- 7.8.1 Where CASS Certified software is used within a call center environment; USPS will consider permitting a false positive reporting option in lieu of the stop processing requirement.

7.9 Standalone Users

- 7.9.1 Standalone Users are classified as customers receiving specially packaged DPV data from a Licensed Service Provider.
- 7.9.2 CASS Certified software developers can create specially designed packages that will allow these users limited DPV Quick Access write-capability for interactive use outside of CASS operations and for non-mailing purposes.
- 7.9.3 USPS will consider entering into an additional agreement with standalone users that may assist in more efficient use of this modified DPV under the given design specifications. In these cases, the users will be required to demonstrate to the satisfaction of USPS that they warrant this consideration.

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- 7.10 All developers must be able to provide false positive reporting and stop processing functions as defined in the Licensee Performance Requirements.
- 7.11 Whenever there is a 49 percent or greater difference between ZIP + 4 file matches and DPV confirmed addresses in a processed mail list, the occurrence must be reported to Dsf2stop@usps.gov (see *Calculating Percentages for the DPV False Positive Header Record* -- Exhibit A). No stop processing is required.
- 7.11.1 These conditions are not applicable for service providers using MASS™ MLOCR equipment in the reprocessing of mail from rejected mail bins (Reject Run).
- 7.12 To assist End Users in bypassing False Positives that have been previously reported; optional data files are available for Licensees to download via the RIBBS website at <http://www.ribbs.usps.gov/files/DPV/>.
- 7.12.1 The Hash False Positive full replacement file (dph.hsf) is updated daily and contains a complete file of the active False Positives. This file is used with the Hash version of the DPV Product and may be used in place of the False Positive file (dph.hsf) provided with the monthly DPV Product.
- 7.12.2 The known Hash False Positive file (dph.hsf_x) is updated daily; however it only contains the known False Positives. This file is also used with the Hash version of the DPV Product.
- 7.12.2.1 To use this file, Licensee must continue to use the False Positive file (dph.hsf) provided with the monthly DPV Product; however if a False Positive is encountered, Licensee's software may check the dph.hsf_x file.
- 7.12.2.2 If the record is found in the known Hash False Positive file, no Stop Processing is required; however the False Positive occurrence must be reported to the USPS within 96 hours of the occurrence in the format described in Exhibit A. If the record is not found in the file, Stop Processing and False Positive reporting must be performed.
- 7.12.3 The known Flat False Positive file (dpf.hsf_x) is updated daily and may be used with the Flat version of the DPV Product.
- 7.12.3.1 If a False Positive is encountered during normal DPV processing, Licensee's software may check the dpf.hsf_x file.
- 7.12.3.2 If the record is found in the known Flat False Positive file, no Stop Processing is required; however the False Positive occurrence must

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be reported to the USPS within 96 hours of the occurrence in the format described in Exhibit A. If the record is not found in this file, Stop Processing and False Positive reporting must be performed.

- 7.12.4 Any of these files must be encapsulated in accordance with section 6.2.
- 7.13 All DPV False Positive reports must be maintained and made available for Postal Service review for a period of five (5) years at Licensee's facility.

8 *Quality Standards and Testing Criteria*

- 8.1 The DPV product is subject to periodic audit and evaluation by USPS to verify the Licensee's process and adherence to the conditions of the DPV License Agreement. All audit files must be processed through the same DPV system used for customer processing.
- 8.2 USPS will test the Licensee's processing system with a series of known and unknown delivery points to validate the Licensee's ability to query DPV.
- 8.3 The audit test will also verify the false positive reporting and stop processing functionality of the interface.
- 8.4 In conjunction with CASS™ certification, this testing will be performed annually or whenever significant changes occur in any software component used within the ZIP + 4 or DPV process. In addition to CASS certification, USPS shall have the right to test the accuracy of the DPV process at any time without advance notice.
- 8.5 Licensee will receive official notification of the audit results. Upon USPS approval, the Licensee may receive confirmation to commence or continue provision of DPV processing.
- 8.6 Applicants will be evaluated for accuracy of CASS assignments. For each test address correctly ZIP + 4 coded by their CASS process, the applicants must correctly answer and provide all DPV elements with 100 percent accuracy of all presented records.
- 8.7 In the event that a problem related to the DPV process is identified, USPS will, at its sole discretion, direct correction of the problem and/or exercise the suspension or termination provisions of the license, as it deems appropriate.

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8.8 Licensee will receive data to test the DPV interface for Stage I and II testing. This data shall only be used for Stage I and II testing and cannot be used in a production environment. This data will be clearly marked as 'test data.'

8.8.1 There is no expiration date on the test data and the data date will be composed of eight (8) 9's.

9 *Expected Output*

9.1 Standardized footnotes have been established to provide consistency of products and facilitate USPS evaluation of customer data.

9.2 For each address submitted by a customer, the Licensee must be able to return the following output on the medium specified by the customer:

9.2.1 Each original mailing address as it was presented.

9.2.2 The standardized address appended with the correct ZIP + 4/DPC, other postal values as may be requested by the customer, and any other intelligence flags or footnotes that result from the CASS processing segment.

9.3 For each mailing address for which there is a match to DPV as defined in this document, the Licensee shall be capable of providing each of the standard footnote codes as listed in Exhibit B. The Licensee shall assign all applicable standard footnote codes for the address.

9.4 For each mailing address for which there is not a match to DPV, the Licensee shall return a standardized address, as appropriate, with a correlating 5-digit ZIP Code. If a standardized address is not attainable, the Licensee must comply with section 9.2.1.

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EXHIBIT A

DPV FALSE POSITIVE FILE LAYOUT

DPV FALSE POSITIVE HEADER RECORD

| FIELD REFERENCE NUMBERS | FIELD DESCRIPTION | LOGICAL LENGTH | RELATIVE POSITION FROM/THRU | CONTENT NOTES |
|----------------------------------------|---------------------------------|---------------------------|--------------------------------------------|--------------------------|
| 1 | MAILER'S COMPANY NAME | 40 | 01 - 40 | |
| 2 | MAILER'S ADDRESS LINE | 58 | 41 - 98 | |
| 3 | MAILER'S CITY NAME | 28 | 99 - 126 | |
| 4 | MAILER'S STATE NAME | 02 | 127 - 128 | |
| 5 | MAILER'S 9DIGIT ZIP | 09 | 129 - 137 | |
| 6 | TOTAL RECORDS PROCESSED | 09 | 138 - 146 | |
| 7 | TOTAL RECORDS DPV MATCHED | 09 | 147 - 155 | |
| 8 | TOTAL POTENTIAL ZIP + 4 RECORDS | 09 | 156 - 164 | |
| 9 | % MATCH RATE TO DPV | 09 | 165 - 173 | |
| 10 | NUMBER OF ZIP CODES ON FILE | 05 | 174 - 178 | |
| 11 | NUMBER OF FALSE POSITIVES | 02 | 179 - 180 | |

DPV FALSE POSITIVE DETAIL RECORD

| FIELD REFERENCE NUMBERS | FIELD DESCRIPTION | LOGICAL LENGTH | RELATIVE POSITION FROM/THRU | CONTENT NOTES |
|----------------------------------------|------------------------------|---------------------------|--------------------------------------------|--------------------------|
| 1 | STREET PRE-DIRECTIONAL | 02 | 01 - 02 | |
| 2 | STREET NAME | 28 | 03 - 30 | |
| 3 | STREET SUFFIX ABBR | 04 | 31 - 34 | |
| 4 | STREET POST-DIRECTIONAL | 02 | 35 - 36 | |
| 5 | ADDRESS PRIMARY NUMBER | 10 | 37 - 46 | |
| 6 | ADDRESS SECONDARY ABBR | 04 | 47 - 50 | |
| 7 | ADDRESS SECONDARY NUMBER | 08 | 51 - 58 | |
| 8 | MATCHED ZIP CODE | 05 | 59 - 63 | |
| 9 | MATCHED PLUS 4 | 04 | 64 - 67 | |
| 10 | FILLER | 113 | 68 - 180 | |

Reference numbers 1–7 are from the input address.
References numbers 8 and 9 are from the matched records.

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**EXHIBIT A
DPV FALSE POSITIVE FILE LAYOUT**

FIELD DESCRIPTION DEFINITIONS

| | |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOTAL RECORDS PROCESSED | The total number of records processed. |
| TOTAL RECORDS DPV MATCHED | The total number of records that DPV confirmed returning the DPV return codes S, Y, or D. |
| TOTAL POTENTIAL ZIP + 4 RECORDS | <p>The total number of ZIP + 4 matches obtained from the CASS Certified address matching portion of the process before going to DPV.</p> <p>All address matching engine records with a Standard Footnote code AA make up this total.</p> |
| % MATCH RATE TO DPV | Determined by dividing the TOTAL RECORDS DPV MATCHED by the TOTAL POTENTIAL ZIP + 4 RECORDS. Take that number and multiply it by 100 giving the % MATCH RATE TO DPV. |
| NUMBER OF ZIP CODES ON FILE | The total number of ZIP codes on the file being processed. |
| NUMBER OF FALSE POSITIVES | The total number of false positive records found in the false positive table (dph.hsf) when processed through DPV. |

CALCULATING PERCENTAGES FOR THE DPV FALSE POSITIVE HEADER RECORD

Formulas

- $\% \text{ MATCH RATE TO DPV} = (\text{TOTAL RECORDS DPV MATCHED} \div \text{TOTAL POTENTIAL ZIP} + 4 \text{ RECORDS}) \times 100$

Examples

If

TOTAL POTENTIAL ZIP + 4 RECORDS = 703,156

TOTAL RECORDS DPV MATCHED = 656,679

Then

$\% \text{ MATCH RATE TO DPV} = 656,679 \div 703,156 = 0.933902 \times 100 = \underline{93.39\%}$

Note: Confirm that the % MATCH RATE TO DPV is greater than 49% (93.39% > 49%). If the results produce **a false condition** ($? \leq 49\%$), notification must be made to USPS immediately at Dsf2stop@usps.gov using the *DPV False Positive Header Record Layout* (Exhibit A)

This Requirement does not apply to Service Providers using MASS MLOC equipment as outlined in 7.11.1.

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EXHIBIT A

DPV FALSE POSITIVE FILE LAYOUT

**OPTIONAL DPV FALSE POSITIVE NOTIFICATION for MASS MLOCR
EQUIPMENT PROCESSES**

Service providers using MASS MLOCR equipment can capture images of mailpieces that cause False Positive table matches. The providers must send these captured images to USPS as described in 7.5.2 with the following MLOCR Owner's information:

1. Service Bureau name
2. Address
3. City name
4. State
5. 9-digit ZIP Code
6. Equipment ID
7. Run ID of the False Positive match as it occurred (if known)
8. Date of the False Positive match
9. Time of the False Positive match
10. Return address on the mailpiece

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**EXHIBIT B
RETURN CODES**

| Return Code | Description |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| Y | Address was DPV confirmed for both primary and secondary (if present) numbers. |
| D | Address was DPV confirmed for the primary number only. Secondary information was missing. |
| S | Address was DPV confirmed for the primary number only. Secondary number information was present but unconfirmed. |
| N | Both primary and secondary (if present) number information failed to DPV confirm. |
| Blank | Address was not presented to DPV. |

STANDARD FOOTNOTES

Standard footnotes shall be provided to customers on request.

| Footnote Code | Description |
|----------------------|----------------------------------------------------------------------------------------------------|
| AA | Input Address Matched to the ZIP + 4 file |
| A1 | Input Address Not Matched to the ZIP + 4 file |
| BB | Input Address Matched to DPV (all components) |
| CC | Input Address Primary Number Matched to DPV but Secondary Number not Matched (present but invalid) |
| F1 | Input Address Matched to a Military Address |
| G1 | Input Address Matched to a General Delivery Address |
| N1 | Input Address Primary Number Matched to DPV but Address Missing Secondary Number |
| M1 | Input Address Primary Number Missing |
| M3 | Input Address Primary Number Invalid |
| P1 | Input Address RR, or HC Box number Missing |
| P3 | Input Address PO, RR, or HC Box number Invalid |
| RR | Input Address Matched to CMRA and PMB designator present (PMB 123 or #123) |
| R1 | Input Address Matched to CMRA but PMB designator not present (PMB 123 or #123) |
| U1 | Input Address Matched to a Unique ZIP Code |

When a match is made in the address matching software, move Y to the DPV return code and spaces to all other flags for footnotes F1, G1, and U1.

Footnotes are for +4 matching and DPV/DSF². Do not use footnotes for Early Warning System (EWS) matches.

Footnote *RR* vs. *R1* – Use *R1* if the original input contains a pound sign (#) and a secondary number, but during the address matching process a match is made to a ZIP + 4 that changes the # to a unit designator.

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EXAMPLE

Input: CMRA To Go
130 Skyline Dr #16
Memphis TN 38119

There is no PMB information on this record; return the R1 footnote.

ZIP + 4 Match: CMRA TO GO
130 SKYLINE DR STE 16
MEMPHIS TN 38119-1234

There is PMB information on this record; return the RR footnote.

ZIP + 4 Match: CMRA TO GO
130 SKYLINE DR #16
MEMPHIS TN 38119-1234

EXHIBIT C

DOUBLE POUND SIGNS (#)

When you are trying to match to an address that contains double pound signs (e.g., 123 Main Street #123 #456), if you match to either of the secondary address components in DPV, you will return Y.

See *Grading Issues* on RIBBS at <http://ribbs.usps.gov/files/CASS/archives/2003MIN.doc> for details on Double # matching.

ABBREVIATED ALIASES

Software can return the street name or the abbreviated alias.

VALIDATE A SECONDARY OF #0 IN CYCLE M

To validate a secondary of #0, the match must be made to a high-rise exact record and a significant leading zero in the secondary before you return Y and footnote AABB. Otherwise, you must return an S and footnote AACC.

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EXHIBIT D

RETURN CODES AND FOOTNOTES WITH SUGGESTIONS FOR MAILERS

| DPV Return Code | Footnote Code | Suggestion |
|------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| N | AA | Verify the address. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the address during the DPV process. A ZIP + 4 code is not returned. |
| N | AA M1 | Verify the Primary Number. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the primary number during the DPV process. A ZIP + 4 code is not returned. |
| N | AA M3 | Verify the Primary Number. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the primary number during the DPV process. A ZIP + 4 code is not returned. |
| N | AA P1 | Verify the Box Number – RR or HC Box number missing. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the box number during the DPV process. A ZIP + 4 code is not returned. |
| N | AA P3 | Verify the Box Number – PO, RR or HC Box number present. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the box number during the DPV process. A ZIP + 4 code is not returned. |
| Y | AA BB | No action needed. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed all address components during the DPV process. A ZIP + 4 code is returned. |
| Y | AA BB RR | No action needed. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA with PMB address during the DPV process. A ZIP + 4 code is returned. |
| Y | AA BB R1 | The address validated. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA address without PMB information during the DPV process. A ZIP + 4 code is returned. |
| Y | AA F1 | The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file for this Military address, and it automatically flagged this as a confirmed DPV record. A ZIP+4 code is returned. Move Y to DPV return code and spaces to all other flags. |
| Y | AA G1 | The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file for this General Delivery address, and it automatically flagged this as a confirmed DPV record. A ZIP + 4 code is returned. Move Y to DPV return code and spaces to all other flags. |
| Y | AA U1 | The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file for this Unique ZIP, and it automatically flagged this as a confirmed DPV record. A ZIP + 4 code is returned. Move Y to DPV return code and spaces to all other flags. |
| S | AA CC | Verify secondary information. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, but it cannot confirm the secondary information during the DPV process. A ZIP + 4 code is returned. |
| S | AA CC RR | Verify secondary information. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA with PMB address during the DPV process but the secondary information cannot be confirmed. A ZIP + 4 code is returned. |

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EXHIBIT D

RETURN CODES AND FOOTNOTES WITH SUGGESTIONS FOR MAILERS

| DPV Return Code | Footnote Code | Suggestion |
|--------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S | AA CC R1 | Verify secondary information. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA address without PMB information during the DPV process although the information is not required for USPS delivery. A ZIP + 4 code is returned. |
| D | AA N1 | Verify secondary information is missing. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed the primary number (but not the secondary number) for this address during the DPV process. A ZIP + 4 code is returned. |
| D | AA N1 RR | Verify secondary information is missing. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA address with PMB information and correct secondary number during the DPV process. A ZIP + 4 code is returned. |
| D | AA N1 R1 | Verify secondary information is missing. The CASS Certified software engine was able to obtain a +4 code from the ZIP + 4 file, and it confirmed this CMRA address without PMB information during the DPV process although the information is not required for USPS delivery. A ZIP + 4 code is returned. |
| Blank | A1 M1 | Verify the Primary Number is missing. The CASS Certified software engine was not able to obtain a +4 code from the ZIP + 4 file, and the record was not submitted to the DPV process. A ZIP + 4 code is not returned. |
| Blank | A1 M3 | Verify the Primary Number is not a valid number. The CASS Certified software engine was not able to obtain a +4 code from the ZIP + 4 file, and the record was not submitted to the DPV process. A ZIP + 4 code is not returned. |
| Blank | A1 | Verify the address is incorrect. The CASS Certified software engine was not able to obtain a +4 code from the ZIP + 4 file, and the record was not submitted to the DPV process. A ZIP + 4 code is not returned. |
| Blank | AA | Verify the address. The CASS Certified software engine was able to match to a non-deliverable record on the ZIP + 4 file. Since the record is non-deliverable a ZIP + 4 code is not returned. |

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Exhibit E

Additional DPV Files and Descriptions

| File | Description | Filename |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| CMRA | Indicates a private business that acts as a mail-receiving agent for specific clients. | Dph.hsc |
| False Positive | Contains the False Positive addresses. Refer to section 7.0 regarding False Positive Reporting and Stop Processing. | Dph.hsf |
| No-Stat | Indicates address is not receiving delivery and the address is not counted as a possible delivery. These addresses are not receiving delivery because a) delivery has not been established; b) customer receives mail as a part of a drop; or c) the address is no longer a possible delivery because the carrier destroys or returns all of the mail. | Dph.hsx |
| Vacant | A delivery point was active in the past, but is currently vacant (in most cases unoccupied over 90 days) and not receiving delivery. | Dph.hsv |

NOTE: The DPV False Positive (dph.hsf) and Known False Positives (dph.hsf_x) files are updated daily and are available on the RIBBS website at <http://www.ribbs.usps.gov/files/DPV/>.

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Exhibit F

Per the USPS DMM®, the ZIP + 4 and City/State data must be updated by ZIP + 4 and City/State Product users within 45 days of the USPS release date. For general use, a data release is valid for 105 days from the USPS release date and users may elect to receive bi-monthly updates. However, USPS recommends DPV Licensees update these files on a monthly basis in order to obtain the best possible results from the DPV process.

The following chart is provided to assist in determining which data release is considered the most current for DPV Licensees.

| Release | Required Use Date | Last Use Date |
|----------------|--------------------------|--------------------------------------|
| | | |
| January 15 | March 1 | March 31 |
| February 15 | April 1 | April 30 |
| March 15 | May 1 | May 31 |
| April 15 | June 1 | June 30 |
| May 15 | July 1 | July 31 |
| June 15 | August 1 | August 31 |
| July 15 | September 1 | September 30 |
| August 15 | October 1 | October 31 |
| September 15 | November 1 | November 30 |
| October 15 | December 1 | December 31 |
| November 15 | January 1 | January 31 |
| December 15 | February 1 | February 28 (Feb 29 in leap year) |

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APPENDIX A

DirectDPV™

1 *Product Description*

- 1.1 DirectDPV is an accumulative archival file that contains the most current information regarding addresses and carrier routes.
- 1.2 DirectDPV identifies changes at the delivery point level. Address records that have been previously processed through CASS Cycle L (or later) can retain the ZIP + 4 information to be used as input to the DirectDPV file, enabling the Licensee to determine if address records are still valid.
- 1.3 If the search criteria is not found in the DirectDPV file, no CASS reprocessing is required at this time. If the search criteria is found in the DirectDPV table, the records require processing. Other mechanisms such as a reverse 9-digit lookup utility (RV9) can be used to reconstruct addresses.
- 1.4 DirectDPV is an authorized validation process. Use of DirectDPV does not alter the mailer requirement to validate addresses every 185 days using CASS Certified software to qualify for automation discount rates.
- 1.5 Use of the DirectDPV table is optional.

2 *Product Fulfillment*

- 2.1 DirectDPV is currently available as part of the DPV product fulfillment to DPV-licensed, CASS Certified address matching software authors.
- 2.2 DirectDPV is provided to NCOA^{Link} Full Service Providers for their use in combination with their DSF²™ or DPV product.

3 *General Requirements*

- 3.1 To use DirectDPV, the mailer must store, at a minimum, the complete ZIP + 4 code for each address record. It is recommended that in addition to the ZIP + 4 code the delivery point value also be stored.

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- 3.1.1 If the delivery point value is not stored, the address may also be looked up in the DirectDPV process using only the ZIP + 4 code. This is done by creating the SHA value based on the ZIP + 4 alone.
- 3.2 If the ZIP + 4 code is not present in the address record, DirectDPV cannot be used; the address record must be submitted for processing through a CASS address matching process.

4 *Specific Requirements*

- 4.1 Any process involving DirectDPV requires certification prior to authorized use. A utility test will be provided that exercises the DirectDPV functions, verifies that they have been correctly implemented, and tabulates statistics on PS Form 3553 correctly.
- 4.2 All addresses within the mailer's file shall be resubmitted to a CASS Certified address matching batch process annually to coincide with the annual CASS requirements.

5 *Acceptable Methods of Using DirectDPV Data*

- 5.1 Probe the table for found condition only.
- Probe the table using the ZIP + 4 or 11-digit.
 - If the record is found, process it through CASS Certified[™] software.
- 5.2 DirectDPV lookup with the developer's reverse address construction.
- Probe the table for found condition.
 - Retrieve converted ZIP + 4[®] and delivery point codes from DirectDPV.
 - If ZIP + 4 and delivery point codes are returned, use developer's method to reconstruct address from 11-digit ZIP retrieved in DirectDPV.
 - If all zeros are returned as 11-digit ZIP, reprocess record through CASS Certified software.
- 5.3 Full DirectDPV lookup
- Probe the table for found condition.
 - Retrieve converted ZIP + 4 and delivery point codes from DirectDPV.
 - If ZIP + 4 and delivery point codes are present, retrieve new address indicia from DirectDPV.

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- If all zeros are returned as 11-digit ZIP, reprocess the record through CASS Certified software.

5.4 Refer to Exhibit F for DirectDPV responses and descriptions.

6 Reporting (CASS Summary Report PS Form 3553)

- 6.1 Where the ZIP + 4 and delivery point value from the mailer's address record does not appear in the DirectDPV data, the address retains its eligibility to be counted as a ZIP + 4 coded address on the PS Form 3553 document. In completing PS Form 3553, addresses confirmed by DirectDPV (NOT FOUND) will be reflected in section C, item c (*DirectDPV*). Refer to PS Form 3553 located at <http://www.usps.com/forms/miscforms.htm>.
- 6.2 Where the ZIP + 4 and delivery point value are found in the DirectDPV data, the address must be recreated from the DirectDPV data or resubmitted to CASS Certified software and updated to qualify for automation rates. Addresses unconfirmed by DirectDPV (FOUND WITH ALL ZEROS) that are reprocessed through CASS Certified software will be reflected in section C, item a (*ZIP + 4/DPV Confirmed*) of PS Form 3553.
- 6.2.1 When an all zero 11-digit is found in the DirectDPV data, the address must be resubmitted to CASS Certified software and updated to qualify for automation rates. Addresses confirmed and converted by DirectDPV (FOUND WITH CONVERTED 11-DIGIT) will be reflected in section C, item c (*DirectDPV*) of PS Form 3553.

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EXHIBIT G

DirectDPV RESPONSES

| DirectDPV RESPONSE | DESCRIPTION |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOT FOUND | The ZIP + 4 or 11-digit is still valid. |
| FOUND WITH ALL ZEROS | DirectDPV found the corresponding address record, but cannot provide a converted 11-digit. The record must be reprocessed through CASS Certified software. |
| FOUND WITH CONVERTED 11-DIGIT | The 11-digit is no longer valid and the converted 11-digit for this address is provided with the address indicia and carrier route. |